MIDMARK®

J-Box

Junction Box User's Guide

Contents

Intended Use 1
Features 1
Operation 1
Removing Styled Junction Box Cover 1
Removing Square Junction Box Cover 1
Removing Small Junction Box Cover 2
"City Water" Pressure Adjustment 2
Delivery System Air Pressure Adjustment 3
Emergency Shutoff of Air & Water at Input to Dental Operatory 4
Operator Maintenance 4
300 W Universal Power Supply Circuit Breaker Reset / Fuse Replacement 4
Filter Replacement 5
Cleaning 6
Specifications 6
Replacement Parts 7
General Information 8

Intended Use

This junction box is intended to provide a connection point between the facility and the dental operatory equipment for electrical power, air, water, vacuum, waste, and other optional accessory needs.

Features

The Midmark junction box has . . .

- shut off valves for the incoming water and air to the junction box. This prevents damage to unattended office due to blown water or air line. The shut off valves are controlled by an ON / STANDBY switch mounted on the delivery unit.
- adjustable air and water regulators to maintain ideal operating pressures.

Operation

Removing Styled Junction Box Cover (Figure 1)

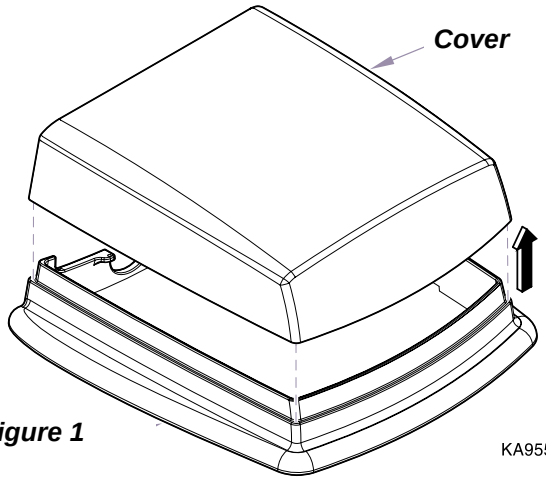


Figure 1

KA955400

Removing Square Junction Box Cover (Figure 2)

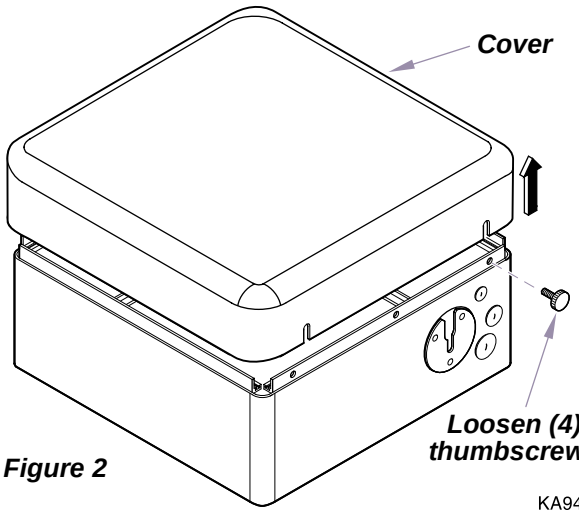


Figure 2

KA946801

© Midmark Corporation 2000 SF-1635

Printed in U.S.A.

Part Number: 003-1111-00 Rev. F (4/02)

Removing Small Junction Box Cover (Figure 3)

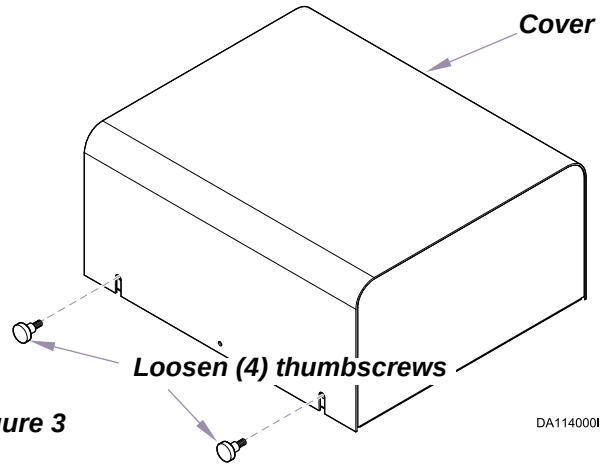


Figure 3

"City Water" Pressure Adjustment

To adjust "city water" pressure:

1) Remove junction box cover.

2) Pull **ADJUSTMENT KNOB** of "city" water regulator out to **unlock** position.

EQUIPMENT ALERT

The recommended pressure setting for the "city water" regulator is 40 PSI (2.8 kg / cm^2); the dental operatory equipment has been designed to operate at this pressure setting. Setting the pressure higher or lower than the recommended setting can damage the operatory equipment or cause poor operating performance.

3) Rotate **ADJUSTMENT KNOB** as necessary until the "city water" pressure gauge reads 40 PSI (2.8 kg / cm^2) +/- 5 PSI (0.35 kg / cm^2).

4) Push **ADJUSTMENT KNOB** of water regulator in to **lock** position.

5) Install junction box cover (Refer to ***Accessing Junction Box*** earlier in this manual).

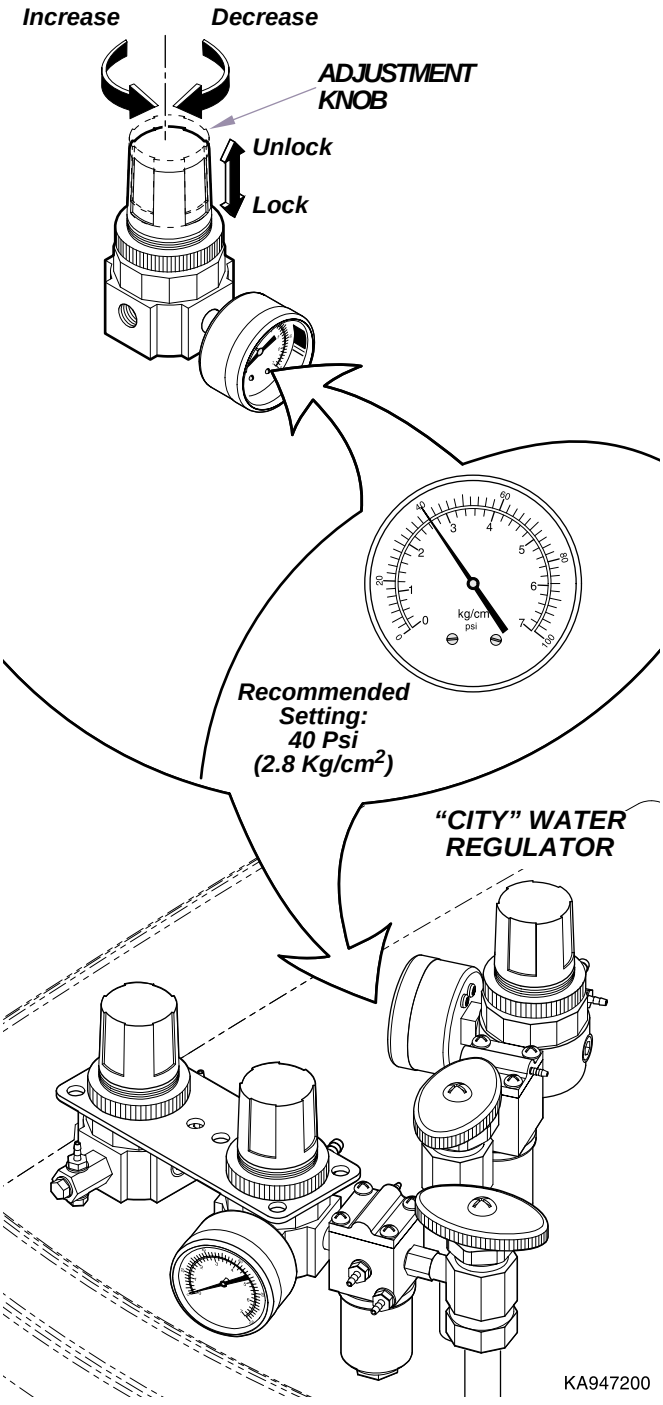


Figure 4

© Midmark Corporation 2000 SF-1635

Printed in U.S.A.

Delivery System Air Pressure Adjustment

To adjust delivery system air pressure:

1) Remove junction box cover (Refer to ***Accessing Junction Bo***x earlier in this manual).

2) Pull **ADJUSTMENT KNOB** of air regulator out to **unlock** position.

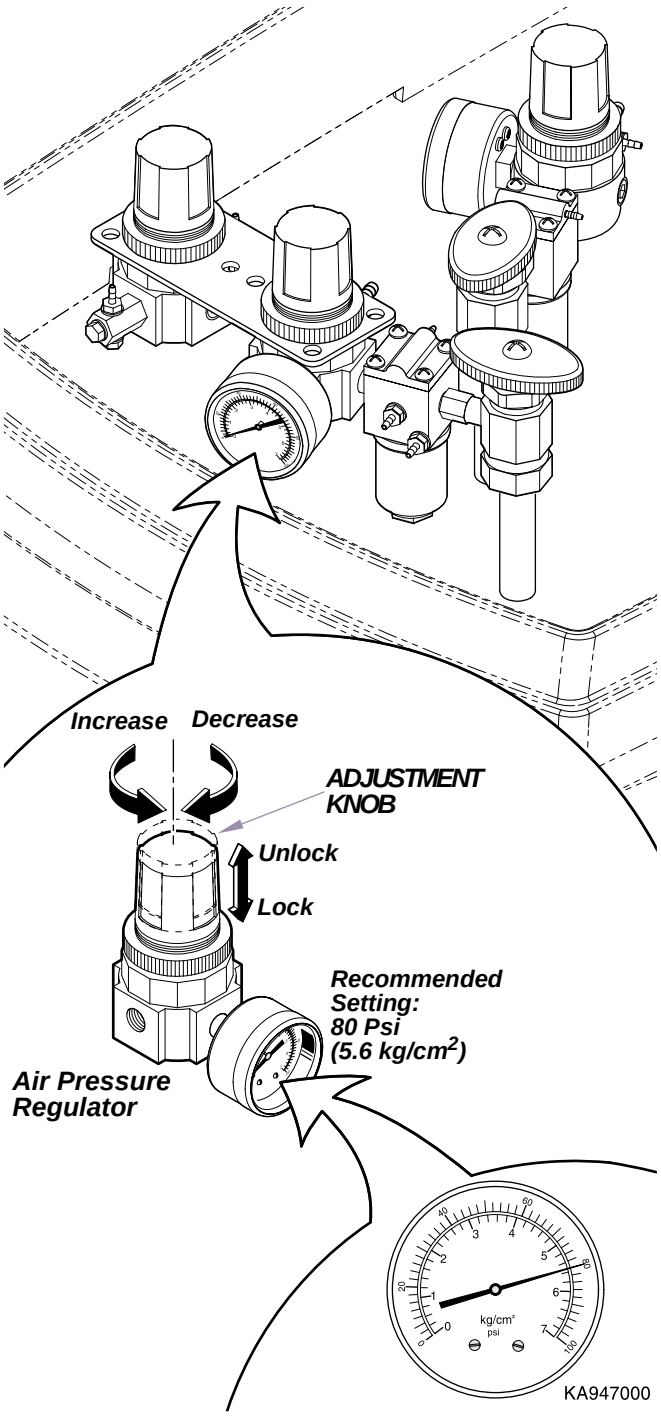
EQUIPMENT ALERT

The recommended pressure setting for the delivery system air regulator is 80 PSI (5.6 kg / cm^2); the dental operatory equipment has been designed to operate at this pressure setting. Setting the pressure higher or lower than the recommended setting can damage the operatory equipment or cause poor operating performance.

3) Rotate **ADJUSTMENT KNOB** as necessary until the delivery system pressure gauge reads 80 PSI (5.6 kg / cm^2) +/- 5 PSI (0.35 kg / cm^2).

4) Push **ADJUSTMENT KNOB** of water regulator in to **lock** position.

5) Install junction box cover (Refer to ***Accessing Junction Box*** earlier in this manual).



© Midmark Corporation 2000 SF-1635

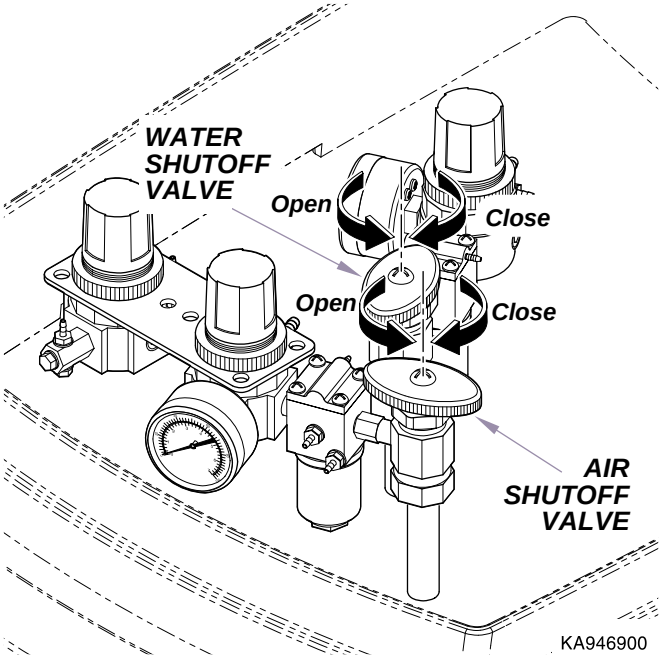
Printed in U.S.A.

Emergency Shutoff of Air & Water at Input to Dental Operatory

NOTE
In the unlikely event of an air or water leak in the dental operatory system, close the air and water shutoff valves in junction box; shutting these valves removes all air and water pressure from entering the dental operatory system. Then, call an authorized service technician (Refer to ***Calling For Service*** in Module A of this manual).

To shut off water and air at input to dental operatory:

1) Remove junction box cover



2) Turn **SHUTOFF VALVE knobs** of air and water shutoff valves to **closed** position.

3) Pull **ADJUSTMENT KNOB** of air regulator out to **unlock** position.

EQUIPMENT ALERT
The recommended pressure setting for the delivery system air regulator is 80 PSI (5.6 kg / cm^2); the dental operatory equipment has been designed to operate at this pressure setting. Setting the pressure higher or lower than the recommended setting can damage the operatory equipment or cause poor operating performance.

4) Rotate **ADJUSTMENT KNOB** as necessary until the delivery system pressure gauge reads 80 PSI (5.6 kg / cm^2) +/- 5 PSI (0.35 kg / cm^2).

5) Push **ADJUSTMENT KNOB** of water regulator in to **lock** position.

6) Install junction box cover (Refer to ***Accessing Junction Box*** earlier in this manual).

Operator Maintenance

300 W Universal Power Supply Circuit Breaker Reset / Fuse Replacement

NOTE
This procedure applies only to junction boxes which have the optional 300 Watt Universal Power Supply for a procedure light or accessories.

There is a circuit breaker and two fuses to check; the transformer output circuit breaker which can be reset and two transformer input fuses which are one time use and must be replaced if blown:

EQUIPMENT ALERT
Do not just reset circuit breaker or replace blown fuse. First determine reason that circuit breaker tripped or fuse blew. Failure to do so could result in damage to equipment.

1) Remove two **THUMBSCREWS** and **JUNCTION BOX COVER** from base.

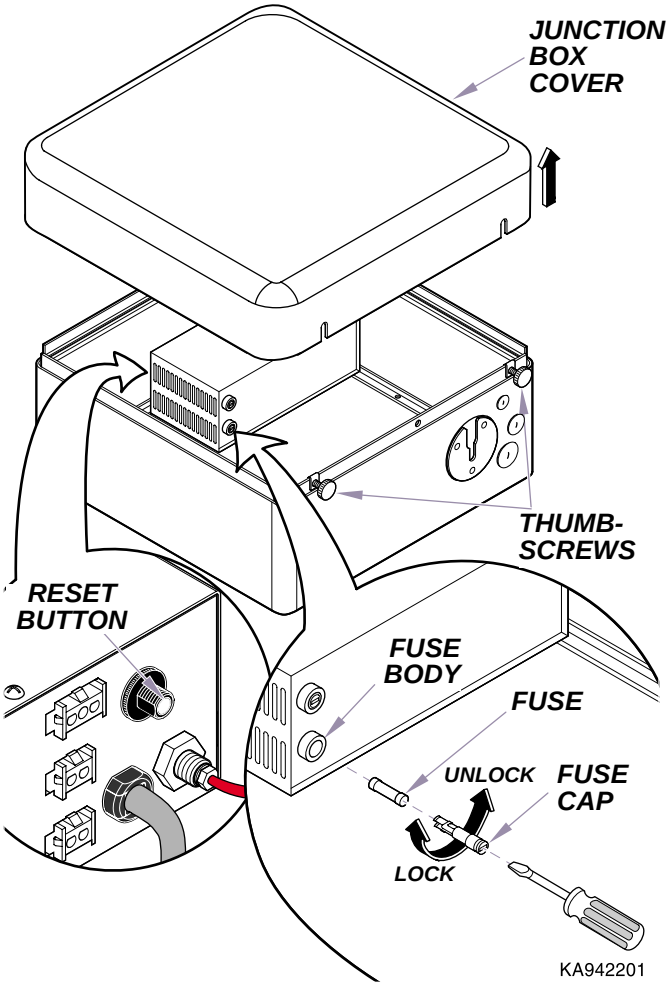
2) Unplug universal power supply cord from outlet receptacle.

3) Check position of white **RESET BUTTON** on circuit breaker. If reset button is flush, this fuse is not tripped. If reset button is protruding, press reset button to reset circuit breaker.

© Midmark Corporation 2000 SF-1635

Printed in U.S.A.

Square Junction Box shown - Styled Junciton Box is similar



4) Using a screwdriver, gently depress **FUSE CAP** and then rotate 1/4 turn in counter-clockwise direction to free fuse cap. Pull fuse cap from **FUSE BODY**. Repeat step for remaining fuse.

5) Inspect **FUSE**(s). Replace if necessary. (Refer to ***Replacement Parts*** or ***Specifications*** section of this manual to order a fuse from your dealer).

6) Insert fuse cap into fuse body. Using a screwdriver, gently depress fuse cap and then rotate 1/4 turn in clockwise direction to secure fuse cap.

Filter Replacement

EQUIPMENT ALERT
It is recommended that filters be replaced every three months. However, depending on water and air quality, they may need to be replaced more frequently.

There is a “city water” sediment filter and a “system air” sediment filter located in junction box. These filters should be replaced every three months to maintain proper air and water flow.

To replace filters:

1) Remove junction box cover.

2) Using 9/16 inch or 14 mm wrench, unscrew FILTER CAPS from FILTER HOUSING (air & water).

3) Unscrew RETAINER NUTS and then remove FILTERS from air and water filter housings.

EQUIPMENT ALERT
Make sure flat end of filters are facing outward toward retainer nut and not inward. Also, shoulder side of retainer nut must be installed so it faces filter. Failure to do so could result in sediment flow around filter.

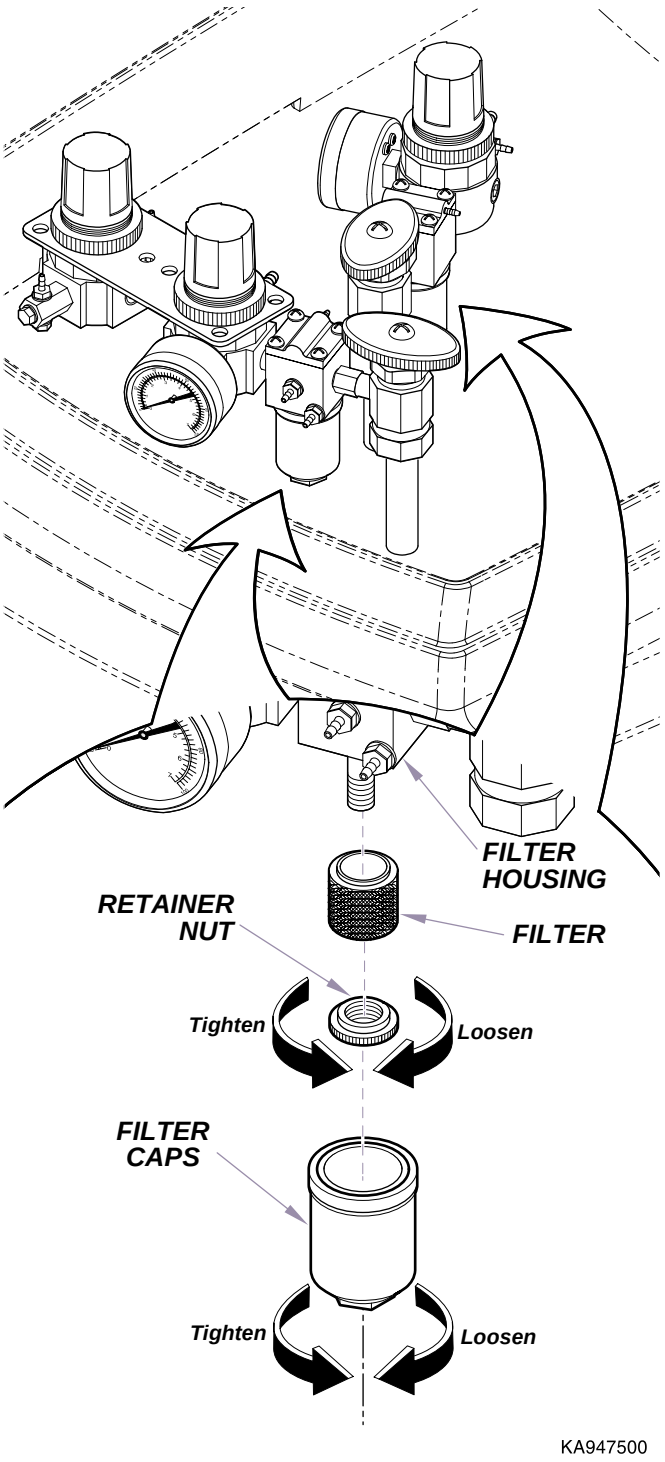
4) Install one 40 micron filter on water filter housing and one on air filter housing and secure with retainer nuts.

5) Using 9/16 inch or 14 mm wrench, screw filter caps on air filter housing and water filter housing, making sure o-ring on end of filter caps are present and are not damaged.

6) Install junction box cover.

© Midmark Corporation 2000 SF-1635

Printed in U.S.A.



Cleaning

EQUIPMENT ALERT

Do not use phenolics, Glutaraldehyde, or Iodophor to clean the unit. These chemicals are too harsh and will eventually damage the plastic and painted components of the unit. Also, do not use "strong" or "full strength" solutions (must be less than 1%) of alcohol or bleach to clean the unit; these solutions tend to discolor plastic components over time.

General Plastic Surfaces - Wipe periodically with a mild soap and water solution. Disinfect as necessary using a Quaternary disinfectant.

General Painted Surfaces - Wipe periodically with a mild soap and water solution. Disinfect as necessary using a Quaternary disinfectant.

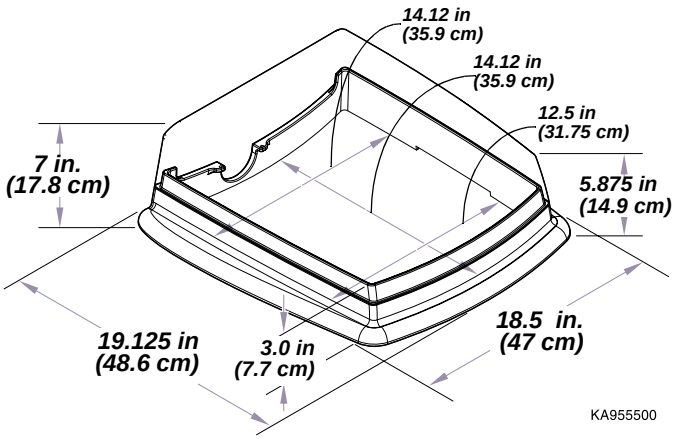
Specifications

Recommended *Regulator Settings:*
"City Water" Water Regulator ..... 40 PSI (2.8 kg / cm^2)
System Air Regulator ..... 80 PSI (5.6 kg / cm^2)
Self-Contained (Distilled Water)
Air Regulator ..... 40 PSI (2.8 kg / cm^2)
Electrical Rating (300 W Power Supply):
115 VAC Unit ..... 115 VAC +/-10%, 3A, 50/60 Hz
230 VAC Unit ..... 230 VAC +/-10%, 1.5A, 50/60 Hz
Replacement Fuses (Line Input):
300 W Universal Power Supply (in Junction Box) ..... 4A, 250V, Type T, time lag, 5 x 20 mm
Classifications ..... Class 1, Type B Applied Part, Ordinary Equipment, Intermittent Operation
Certifications ..... UL-2601, CAN/CSA-C22.2 No. 601.1

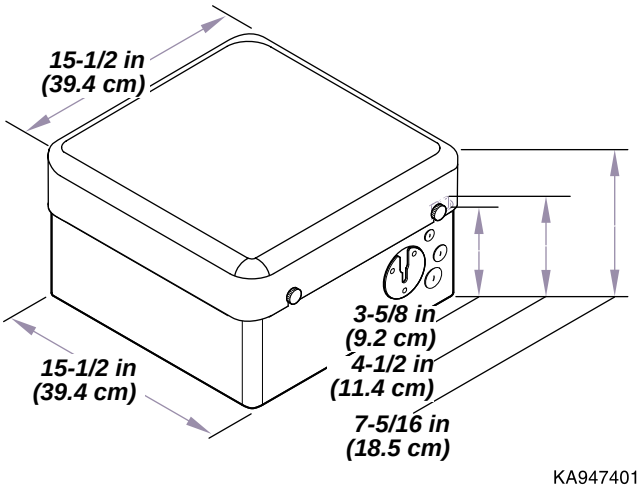
© Midmark Corporation 2000 SF-1635

Printed in U.S.A.

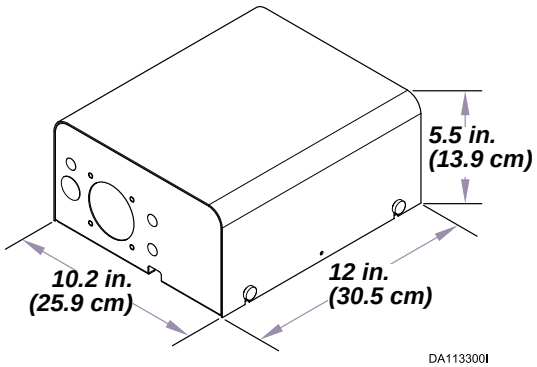
Styled Junction Box Dimensions



Square Junction Box Dimensions



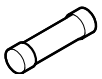
Small Junction Box Dimension



Replacement Parts

The following parts can be purchased from your dealer:

Replacement Fuse, 300 Watt Universal Power Supply Part # 015-0346-01



Replacement Air & Water Sediment Filter - 40 Micron Part # 053-1166-00

© Midmark Corporation 2000 SF-1635

Printed in U.S.A.

MIDMARK®

General Information

Electromagnetic Interference

Midmark dental operatory components are designed and built to minimize electromagnetic interference with other devices. However, if interference is noticed between another device and this operatory, remove interfering device from room or plug product into an isolated circuit.

Symbols & Notes

DANGER

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. The DANGER symbol is limited to the most extreme situations.

WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

EQUIPMENT ALERT

Indicates an imminently or potentially hazardous situation which, if not avoided, will or may result in serious, moderate, or minor equipment damage.

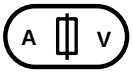
NOTE

Amplifies an operating procedure, practice, or condition.

Type B, Applied Part

Consult operator's manual for important information.

Dangerous voltage / shock hazard.

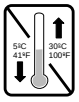


Fuse rating specification

Protective earth ground

Fragile

Proper shipping orientation



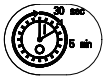
Minimum and maximum storage temperatures

Keep dry

Hot surface

ON

STANDBY



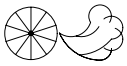
Duty cycle: (motor run time 30 sec. on, 5 min. off).

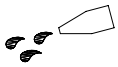
Cup Fill water flow adjustment.

Bowl Flush water flow adjustment

"City" water

Self-contained (distilled) water


Handpiece drive air adjustment

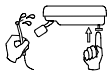

Handpiece/Syringe coolant water flow adjustment

Handpiece coolant air adjustment / Air Quick Disconnect

Water Quick Disconnect

Unlocked (Chair rotation)

Locked (Chair rotation)


Handpiece flush button
(***Note***: Remove handpiece from station; then remove handpiece from tubing connector).

© Midmark Corporation 2000 SF-1635

Printed in U.S.A.